

Amendments to the Claims

Claims **1-33** (canceled)

- 34.** (original) A method of printing onto textiles comprising:
removing fibers from the surface of the substrate; then
ink jet printing onto the substrate.
- 35.** (original) The method of claim **34** wherein:
the removing of the fibers includes shaving the surface of the substrate.
- 36.** (original) The method of claim **34** wherein:
the removing of the fibers includes singeing the surface of the substrate.
- 37.** (original) The method of claim **34** wherein:
the removing of the fibers is performed on the substrate when supported on the
frame of a printing machine; and
the printing is carried out while the substrate is still supported on the frame of the
printing machine.

Claims **38-47** (canceled)

- 48.** (original) A method of printing onto textiles comprising:
providing a substrate support with a layer of non-stick protective material;
supporting a textile having pores therein above the substrate support with the layer
of non-stick protective sheet material between the substrate support and the substrate;
jetting UV curable ink onto the substrate with some of the ink passing through the
pores of the substrate onto the layer of material;
exposing the jetted UV curable ink to UV light;
removing the substrate from above the support;
wiping exposed UV curable ink from the layer of protective sheet material.
- 49.** (original) The method of claim **48** wherein:
the non-stick protective material is a coating of material on the support to which
UV ink, jetted thereon and at least partially cured, has an adhesive force sufficiently high to
prevent such ink from being wiped from the coating by the friction of the substrate sliding over
the support, but has an adhesive force that is, or can be made, sufficiently low to allow such ink
to be cleaned from the support; and
the textile is supported on the substrate support in contact with the layer of non-
stick protective sheet material.

50. (original) The method of claim **48** wherein:
the supporting of the textile above the substrate support includes extending the substrate in tension, spaced from the substrate support adjacent the layer of non-stick protective sheet material at least in a region between the printhead and the substrate support.

51. (original) An ink jetting printing apparatus comprising:
a substrate table;
a layer of non-stick protective material overlying the table so as to collect, and protect the substrate support from, ink jetted toward a porous substrate over the table and passing through the porous substrate;
an ink jet printhead directed toward the table;
a curable head positioned adjacent the table to facilitate the curing of ink jetted from the printhead toward a substrate over the table.

52. (original) The apparatus of claim **51** wherein the non-stick protective material is TEFLON.

53. (original) The apparatus of claim **51** wherein the curing head includes a primary UV light curing source positioned to expose ink that has been jetted onto a substrate over the table.

54. (original) The apparatus of claim **53** wherein the curing source is mounted on or near a carriage on which the printhead is mounted so as to cure ink immediately after it reaches the substrate so that the dots of ink are frozen before they have a chance to flow into the substrate or spread.

55. (original) The apparatus of claim **53** wherein the UV source has a focal length sufficiently long so that the light penetrates holes in the substrate and cures ink on the underlying layer.

56. (original) The apparatus of claim **51** wherein the non-stick protective material is a coating of material on the table to which UV ink, jetted thereon and at least partially cured, has an adhesive force sufficiently high to prevent such ink from being wiped from the coating by the friction of the substrate sliding over the table, but has an adhesive force that is, or can be made, sufficiently low to allow such ink to be cleaned from the table.

57. (original) The apparatus of claim **51** further comprising:
guide structure configured and positioned to support the substrate proximate to but out of contact with the non-stick protective material at least in a region between the printhead and the substrate table.

58. (original) The apparatus of claim **57** wherein:
the guide structure includes transversely extending sets of pinch elements, one set located upstream of the printhead and one set located downstream of the printhead, to hold the substrate in tension proximate but out of contact with the table.

59. (original) The apparatus of claim 57 wherein:

the guide structure includes transversely extending pairs of rollers, one pair located upstream of the printhead and one pair located downstream of the printhead, to hold the substrate proximate but out of contact with the table.

60. (original) An ink jetting printing apparatus comprising:

a substrate support;
a layer of non-stick protective material overlying the support so as to collect, and protect the substrate support from, ink jetted toward a porous substrate on the support and passing through the porous substrate;
an ink jet printhead directed toward the support;
a curable head positioned adjacent the support to facilitate the curing of ink jetted from the printhead toward a substrate on the support.

61. (Currently Amended) An ink jet printing apparatus comprising:

an ink jet printhead configured to jet UV curable ink onto a substrate;
a UV curing head configured to at least partially cure UV curable ink jetted onto the substrate; and
a heated [[plate]] surface configured to thermally contact the substrate having the at least partially cured UV curable ink thereon.

62. (Currently Amended) The apparatus of ~~any of claims 63 through~~ claim 61 further comprising wherein:

~~means for cleaning an ink jet printhead~~ the heated surface is a heated plate.

63. (original) An ink jet printing apparatus comprising:

a frame having a substrate support area thereon;
an ink jet printhead configured to jet onto a substrate on the substrate support area a UV curable ink;
a UV source configured to substantially cure the UV curable ink on the substrate;
and
a head cleaning station beside the substrate support area having located thereat means for purging the printhead and wiping the printhead.

64. (new) A method of printing onto textiles comprising:

supporting a textile having pores therein;
jetting ink onto the substrate with some of the ink passing through the pores of the substrate;
the supporting of the textile includes extending the substrate in tension to form a space behind the substrate so that the ink passing through the pores in the substrate pass through the space away from the surface of the substrate.

65. (new) The method of claim 64 further comprising:
 providing a support surface behind the substrate with the space formed between the substrate and the support surface, the support surface having a layer of non-stick protective material thereon;
 the textile being supported above the support surface with the layer of non-stick protective sheet material between the support surface and the space;
 the jetting includes jetting UV curable ink onto the substrate with some of the ink passing through the pores of the substrate onto the layer of material;
 removing the substrate to expose the support surface;
 wiping ink from the layer of protective sheet material.
 the jetting includes jetting UV curable ink onto the substrate with some of the ink passing through the pores of the substrate onto the layer of material;
 exposing the jetted UV curable ink to UV light;
 removing the substrate from above the support;
 wiping exposed UV curable ink from the layer of protective sheet material.

66. (new) The method of claim 64 further comprising:
 providing a support surface behind the substrate with the space formed between the substrate and the support surface, the support surface having a layer of non-stick protective material thereon;
 the textile being supported above the support surface with the layer of non-stick protective sheet material between the support surface and the space;
 the jetting includes jetting ink onto the substrate with some of the ink passing through the pores of the substrate onto the layer of material;
 removing the substrate to expose the support surface;
 wiping ink from the layer of protective sheet material.

67. (new) The method of claim 66 wherein the non-stick protective material is TEFLON.

68. (new) An ink jetting printing apparatus comprising:
 a substrate table;
 an ink jet printhead directed toward the table;
 guide structure configured and positioned to support a substrate proximate to but out of contact with the substrate table at least in a region between the printhead and the substrate table, forming a space in said region so that jetted ink passing through the substrate from the printhead and onto the table is out of contact with the back of the substrate.

69. (new) The apparatus of claim 68 further comprising:
 a layer of non-stick protective material overlying the table so as to collect, and protect the substrate table from, ink jetted toward a porous substrate over the table and passing through the porous substrate;
 an ink jet printhead directed toward the table;
 a curable head positioned adjacent the table to facilitate the curing of ink jetted from the printhead toward a substrate over the table

70. (new) The apparatus of claim **69** wherein the non-stick protective material is TEFLON.

71. (new) The apparatus of claim **69** wherein the curing head includes a primary UV light curing source positioned to expose ink that has been jetted onto a substrate over the table.

72. (new) The apparatus of claim **71** wherein the curing source is mounted on or near a carriage on which the printhead is mounted so as to cure ink immediately after it reaches the substrate so that the dots of ink are frozen before they have a chance to flow into the substrate or spread.

73. (new) The apparatus of claim **71** wherein the UV source has a focal length sufficiently long so that the light penetrates holes in the substrate and cures ink on the underlying layer.

74. (new) The apparatus of claim **69** further comprising:
the guide structure includes transversely extending sets of pinch elements, one set located upstream of the printhead and one set located downstream of the printhead, to hold the substrate in tension proximate but out of contact with the table.

75. (new) The apparatus of claim **69** further comprising:
the guide structure includes transversely extending pairs of rollers, one pair located upstream of the printhead and one pair located downstream of the printhead, to hold the substrate proximate but out of contact with the table.

76. (new) A printing apparatus comprising:
a printing station having an ink jet printhead thereat;
a web guide configured and positioned to guide a substrate into the printing station and to maintain in tension through the printing station;
the printing station being configured to provide a gap adjacent the substrate maintained in tension through the printing station on the opposite side of the substrate from the printhead to prevent ink deposited onto the substrate by the printhead from accumulating on the side of the substrate opposite the printhead.

77. (new) The apparatus of claim **76** further comprising:
a heated surface downstream of the printing station positioned to contact the substrate having ink thereon to heat the substrate and dry ink on the substrate.

78. (new) The apparatus of claim **76** further comprising:
heating elements downstream of the printing station to heat the substrate and dry ink on the substrate.

79. (new) The apparatus of claim **76** further comprising:
a convex curved heated surface over which the substrate moves downstream of the printing station.

80. (new) The apparatus of claim 76 further comprising:
a vacuum source which generates a suction on the substrate.
81. (new) The apparatus of claim 76 further comprising:
an absorbent layer on the opposite side of the substrate from the printhead positioned to absorb excess ink on said side of the substrate.
82. (new) The apparatus of claim 76 wherein:
the printhead is configured to jet UV curable ink onto the substrate;
a UV curing light is provided proximate the printhead to at least partially cure UV ink jetted on the substrate;
a heated surface is provided downstream of the printing station to contact and heat the substrate having the at least partially cured UV ink thereon.
83. (new) A printing apparatus comprising:
a printing station having a printhead;
a web guide having structure which guides a substrate into the printing apparatus, a substantially flat surface over which the substrate moves, and structure which maintain tension on the substrate as the substrate moves through the printing station;
a substantially convex curved surface over which the substrate moves downstream of the printing station and including heating elements to heat curved surface and the substrate;
and
the substantially flat surface including a section opposite the substrate from the printhead and spaced from the substrate to provide a gap to prevent excess ink deposited onto the substrate from accumulating underneath the substrate.
84. (new) A method of guiding a substrate through a printing system comprising:
moving the substrate through a printing section of the printing system while applying tension to the substrate;
as the substrate moves through the printing system, provide a gap over which the substrate moves to minimize excess ink deposited on the substrate from accumulating underneath the substrate;
heating the substrate after printing on the substrate.